



ARMSTRONG WORLD INDUSTRIES, INC.  
1645 RAILROAD AVENUE  
ST. HELENS, OREGON 97051  
503-397-0704  
www.armstrong.com

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July 8, 2016

U. S. Environmental Protection Agency  
CR-ERNS Coordinator  
Superfund Response and Investigation Section  
1200 Sixth Avenue, Suite 900  
Seattle, WA 98101

Re: First Anniversary Follow Up Report– Ammonia Continuous Release  
Armstrong St. Helens Plant  
CR-ERNS# 1120241  
OER# 2015-1296  
**Certified Mail, Return Receipt Requested**

Dear Sir or Madam:

In accordance with "Reporting Continuous Releases of Hazardous Substances Final Rule" (40 CFR Parts 302.8 and 355.40), enclosed you will find the first anniversary follow up report for an ammonia continuous release. The report form used is the TRI Form R ammonia report along with the CR-ERNS Report addendum pages to the Form R containing additional continuous release information.

If you have any questions, please do not hesitate to contact John Ackiewicz, Global EHS Manager, at (717) 396-5373 for additional details.

Sincerely,



Blane Peterson  
Plant Manager  
(503) 397-7644

USEPA SF



1490197

<b>EPA</b> United States Environmental Protection Agency		<b>FORM R</b>		TRI Facility ID Number 97051RMSTR1645R	
Section 313 of the Emergency Planning and Community Right-to-know Act of 1986, also known as Title III of the Superfund Amendments and Reauthorization Act.		Toxic Chemical, Category, or Generic Name Ammonia			
WHERE TO SEND COMPLETED FORMS		1 TRI Data Processing Center P.O. Box 10163 Fairfax, VA 22038 *** File Copy Only: Do Not Submit Paper Form to EPA ***		2. APPROPRIATE STATE OFFICE (See instructions in Appendix F)	
This section only applies if you are revising or withdrawing a previously submitted form, otherwise leave blank:		Revision (Enter up to two code(s)) [ ] [ ]		Withdrawal (Enter up to two code(s)) [ ] [ ]	
Important: See Instructions to determine when "Not Applicable (NA)" boxes should be checked					
Part I. FACILITY IDENTIFICATION INFORMATION					
SECTION 1. REPORTING YEAR: 2015					
SECTION 2. TRADE SECRET INFORMATION					
2.1 Are you claiming the toxic chemical identified on page 2 trade secret? <input type="checkbox"/> Yes (Answer questions 2.2, attach substantiation forms) <input checked="" type="checkbox"/> NO (Do not answer 2.2, go to Section 3)		2.2 Is this copy <input type="checkbox"/> Sanitized <input type="checkbox"/> Unsanitized (Answer only if "Yes" in 2.1)			
SECTION 3. CERTIFICATION (Important: Read and sign after completing all form sections.)					
I hereby certify that I have reviewed the attached documents and that, to the best of my knowledge and belief, the submitted information is true and complete and that the amounts and values in this report are accurate based on reasonable estimates using data available to the preparers of this report.					
Name and official title of owner/operator or senior management official:		Signature:		Date Signed:	
File Copy Only: Do Not Submit Paper Form to EPA		File Copy Only: Do Not Submit Paper Form to EPA		XX/XX/XXXX	
SECTION 4. FACILITY IDENTIFICATION					
4.1		TRI Facility ID Number		97051RMSTR1645R	
Facility or Establishment Name ARMSTRONG WORLD INDUSTRIES INC					
Street 1645 RAILROAD AVE		Mailing Address (if different from physical street address) 1645 RAILROAD AVE			
City/County/Tribe/State/ZIP Code SAINT HELENS / Columbia / BIA Code: / OR / 97051		City/State/ZIP Code SAINT HELENS / OR / 970513100		Country (Non-US)	
4.2 This report contains information for: (Important, check a or b, check c or d if applicable)		a <input checked="" type="checkbox"/> An Entire facility		b <input type="checkbox"/> Part of a facility	
		c <input type="checkbox"/> A Federal facility		d <input type="checkbox"/> GOCO	
4.3 Technical Contact name BARB JEFFORDS		Email Address bmjeffords@armstrongceilings.com		Telephone Number (include area code and ext.) 503-397-7674	
4.4 Public Contact name JENNIFER JOHNSON		Email Address JENNIFERJOHNSON@armstrongceilings.com		Telephone Number (include area code and ext.) 717-396-3393	
4.5 NAICS Code(s) (6 digits) a 339999 (Primary) b. c. d. e. f.					
4.6 Dun and Bradstreet Number(s) (9 digits)					
a 001307792					
b					
SECTION 5. PARENT COMPANY INFORMATION					
5.1 Name of U.S. Parent Company (for TRI Reporting purposes)		ARMSTRONG WORLD INDUSTRIES INC		No U.S. Parent Company (for TRI Reporting purposes) <input type="checkbox"/>	
5.2 Parent Company's Dun & Bradstreet Number		NA <input type="checkbox"/> 001307792			



**EPA FORM R**  
**PART II. CHEMICAL - SPECIFIC INFORMATION**

TRI Facility ID Number

97051RMSTR1645R

Toxic Chemical, Category, or Generic Name

Ammonia

**SECTION 1. TOXIC CHEMICAL IDENTITY** (Important: DO NOT complete this section if you are reporting a mixture component in Section 2 below.)

1.1	CAS Number (Important: Enter only one number exactly as it appears on the Section 313 list. Enter category code if reporting a chemical category.) 7664417
1.2	Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.) Ammonia
1.3	Generic Chemical Name (Important: Complete only if Part I, Section 2.1 is checked "Yes". Generic Name must be structurally descriptive.) NA

**SECTION 2. MIXTURE COMPONENT IDENTITY** (Important: DO NOT complete this section if you completed Section 1 above.)

2.1	Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, spaces, and punctuation.) NA
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**SECTION 3. ACTIVITIES AND USES OF THE TOXIC CHEMICAL AT THE FACILITY**

(Important: Check all that apply.)

3.1	Manufacture the toxic chemical: a. <input checked="" type="checkbox"/> Produce b. <input type="checkbox"/> Import	3.2	Process the toxic chemical: a. <input type="checkbox"/> As a reactant b. <input checked="" type="checkbox"/> As a formulation component c. <input type="checkbox"/> As an article component d. <input type="checkbox"/> Repackaging e. <input type="checkbox"/> As an impurity	3.3	Otherwise use the toxic chemical: a. <input type="checkbox"/> As a chemical processing aid b. <input type="checkbox"/> As a manufacturing aid c. <input type="checkbox"/> Ancillary or other use
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**SECTION 4. MAXIMUM AMOUNT OF THE TOXIC CHEMICAL ON-SITE AT ANY TIME DURING THE CALENDAR YEAR**

4.1	<input checked="" type="checkbox"/> 02 (Enter two-digit code from instruction package.)
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**SECTION 5. QUANTITY OF THE TOXIC CHEMICAL ENTERING EACH ENVIRONMENTAL MEDIUM ON-SITE**

		A. Total Release (pounds/year*) (Enter range code or estimate**)	B. Basis of Estimate (Enter code)	C. Percent from Stormwater
5.1	Fugitive or non-point air emissions NA <input type="checkbox"/>	370	M2	
5.2	Stack or point air emissions NA <input type="checkbox"/>	26939	E2	
5.3	Discharges to receiving streams or water bodies (Enter one name per box) NA <input checked="" type="checkbox"/>			
	Stream or Water Body Name	Reach Code (optional)		
5.3.1	NA			

\*For Dioxin and Dioxin-like Compounds, report in grams/year

\*\*Range Codes: A=1-10 pounds; B=11-499 pounds; C=500-999 pounds.

EPA FORM R  
PART II. CHEMICAL - SPECIFIC INFORMATION (CONTINUED)

TRI Facility ID Number

97051RMSTR1645R

Toxic Chemical, Category, or Generic Name

Ammonia

## SECTION 5. QUANTITY OF THE TOXIC CHEMICAL ENTERING EACH ENVIRONMENTAL MEDIUM ON-SITE (Continued)

	NA	A. Total Release (pounds/year*) (Enter range code** or estimate)	B. Basis of Estimate (Enter code)
5.4-5.5 Disposal to land on-site			
5.4.1 Class I Underground Injection wells	[ X ]		
5.4.2 Class II-V Underground Injection wells	[ X ]		
5.5.1.A RCRA subtitle C landfills	[ X ]		
5.5.1.B Other landfills	[ X ]		
5.5.2 Land treatment/application farming	[ X ]		
5.5.3.A RCRA Subtitle C surface impoundments	[ X ]		
5.5.3.B Other surface impoundments	[ X ]		
5.5.4 Other disposal	[ X ]		

## SECTION 6. TRANSFER(S) OF THE TOXIC CHEMICAL IN WASTES TO OFF-SITE LOCATIONS

6.1 DISCHARGES TO PUBLICLY OWNED TREATMENT WORKS (POTWs) NA [ X ]

\*For Dioxin and Dioxin-like Compounds, report in grams/year

\*\*Range Codes: A=1-10 pounds; B=11-499 pounds; C=500-999 pounds.



<b>EPA FORM R</b> <b>PART II. CHEMICAL - SPECIFIC INFORMATION (CONTINUED)</b>						TRI Facility ID Number 97051RMSTR1645R	
						Toxic Chemical, Category, or Generic Name Ammonia	
6.2 TRANSFERS TO OTHER OFF-SITE LOCATIONS						NA [ ]	
6.2.1 Off-Site EPA Identification Number (RCRA ID No.)						NA	
Off-Site Location Name:						WASTE MANAGEMENT	
Off-Site Address:						3205 SE MINTER BRIDGE ROAD	
City	HILLSBORO	County	Washington	State	OR	Zip	97123
						Country (Non-US)	
Is location under control of reporting facility or parent company?						[ ] Yes [ X ] No	
A. Total Transfer (pounds/year*) (Enter range code** or estimate)		B. Basis of Estimate (Enter code)		C. Type of Waste Treatment/Disposal/ Recycling/Energy Recovery (Enter code)			
1. 0		1. 0		1. M64			
SECTION 7A. ON-SITE WASTE TREATMENT METHODS AND EFFICIENCY							
[ X ] Not Applicable (NA) - Check here if no on-site waste treatment is applied to any waste stream containing the toxic chemical or chemical category.							
a. General Waste Stream (Enter code)	b. Waste Treatment Method(s) Sequence (Enter 3- or 4-character code(s))			c. Waste Treatment Efficiency (Enter 2 character code)			

\*For Dioxin and Dioxin-like Compounds, report in grams/year  
 \*\*Range Codes: A=1-10 pounds; B=11-499 pounds; C=500-999 pounds.

**EPA FORM R**  
**PART II. CHEMICAL - SPECIFIC INFORMATION (CONTINUED)**

TRI Facility ID Number

97051RMSTR1645R

Toxic Chemical Category or Generic Name

Ammonia

**SECTION 7B. ON-SITE ENERGY RECOVERY PROCESSES**

[ X ] NA - Check here if no on-site energy recovery is applied to any waste stream containing the toxic chemical or chemical category.

Energy Recovery Methods [Enter 3-character code(s)]

**SECTION 7C. ON-SITE RECYCLING PROCESSES**

[ X ] NA - Check here if no on-site recycling is applied to any waste stream containing the toxic chemical or chemical category.

Recycling Methods [Enter 3-character code(s)]

**SECTION 8. SOURCE REDUCTION AND WASTE MANAGEMENT**

		Column A Prior Year (pounds/year*)	Column B Current Reporting Year (pounds/year*)	Column C Following Year (pounds/year*)	Column D Second Following Year (pounds/year*)
<b>8.1 - 8.7 Production-Related Waste Managed</b>					
8.1a	Total on-site disposal to Class I Underground Injection Wells, RCRA Subtitle C landfills, and other landfills	NA	NA	NA	NA
8.1b	Total other on-site disposal or other releases	25818	27309	27309	27309
8.1c	Total off-site disposal to Class I Underground Injection Wells, RCRA Subtitle C landfills, and other landfills	0	0	0	0
8.1d	Total other off-site disposal or other releases	NA	NA	NA	NA
8.2	Quantity used for energy recovery on-site	NA	NA	NA	NA
8.3	Quantity used for energy recovery off-site	NA	NA	NA	NA
8.4	Quantity recycled on-site	NA	NA	NA	NA
8.5	Quantity recycled off-site	NA	NA	NA	NA
8.6	Quantity treated on-site	NA	NA	NA	NA
8.7	Quantity treated off-site	NA	NA	NA	NA
8.8	Non-production-related waste managed**		NA		
8.9	[X] Production ratio or [ ] Activity ratio (select one and enter value to right)		0.95		
8.10	Did your facility engage in any newly implemented source reduction activities for this chemical during the reporting year? If so, complete the following section; if not, check NA.		NA [X]		
	Source Reduction Activities (Enter code(s))	Methods to Identify Activity (Enter code(s))			Estimated annual reduction (Enter code (s)) (optional)
8.10.1	NA				

\*For Dioxin and Dioxin-like Compounds, report in grams/year

\*\* Includes quantities released to the environment or transferred off-site as a result of remedial actions, catastrophic events, or other one-time events not associated with production processes



TRI Facility ID Number

97051RMSTR1645R

Toxic Chemical, Category, or Generic Name

Ammonia

Section 8.11: If you wish to submit additional optional information on source reduction, recycling, or pollution control activities, provide it here.

Topic	Comment
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Section 9.1: If you wish to submit any miscellaneous, additional, or optional information regarding your Form R submission, provide it here.

Topic	Comment
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Production or Activity Variable	Acoustic Ceiling Tiles
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## CR-ERNS Report -- Addendum to Form R

This Form serves as an addendum to EPCRA Section 313 Toxic Release Inventory (TRI) Form R. This along with EPCRA 313 Form R will provide EPA with the required information for reporting continuous releases.

**Name of Facility:** Armstrong World Industries, Inc.

**CR-ERNS #:** 1120241

**Type of Report:** Indicate below the type of report you are submitting.

☐

Initial  
Written  
Report

☒

First  
Anniversary  
Follow-up  
Report

☐

Written Notification  
of a Change to Initial  
Written Report

☐

Written Notification  
of a Change to  
Follow-up Report

**Signed Statement:** I certify that the hazardous substances releases described herein are continuous and stable in quantity and rate under the definitions in 40 CFR 302.8(a) or 355.4(a)(2)(iii) and that all submitted information is accurate and current to the best of my knowledge.

**Blane Peterson, Plant Manager**

Name and Position

7/14/16  
Date

[Signature]  
Signature

**Population Density:** Choose the range that describes the population density within a one-mile radius of your facility.

\_\_\_\_\_ 0 - 50 people

\_\_\_\_\_ 101 - 500 people

X

Over 1000 people

\_\_\_\_\_ 51-100 people

\_\_\_\_\_ 501- 1000 people

**Sensitive Populations and Ecosystems:** Indicate all sensitive populations and ecosystems within a one-mile radius include the distance and direction from the facility.

Sensitive Population or Ecosystems	Distance and direction from facility
Wetlands	Less than 1 mile to the South, East, and West of the facility.



**CR-ERNS Report -- Addendum to Form R****CR-ERNS #: 1120241**

**Source Information:** For EACH source of a release from your facility, provide the following information on a SEPARATE sheet.

**Name of Source:** **Armstrong Prime Line of Flame**

Indicate whether the release from this source is either:

continuous without interruption \_\_\_\_\_ OR routine, anticipated, intermittent X

Pattern of the Release: Identify below how you established the pattern of release and calculated release estimates.

\_\_\_\_\_ Past release data X Knowledge of the facility's operations and release history X Engineering Estimates

\_\_\_\_\_ AP-42 X Best professional judgement \_\_\_\_\_ Other (explain)

Environmental Medium affected by the release from this source:

X Air \_\_\_\_\_ Surface Water \_\_\_\_\_ Soil or Ground Water

Air

If release is to air, please indicate stack height OR surface area of the release.

54' \_\_\_\_\_ Stack Height OR \_\_\_\_\_ Surface Area

Surface  
Water

If release is to Surface Water, please indicate name, type and specific information of the water body:

Name of water body \_\_\_\_\_

If stream: \_\_\_\_\_ Stream Order OR \_\_\_\_\_ Average flow rate (ft<sup>3</sup>/sec)

If lake: \_\_\_\_\_ Surface area (ac) AND \_\_\_\_\_ Average Depth (m)

Soil or  
Ground Water

Indicate distance of closest water well: \_\_\_\_\_

**Hazardous Substance Information:**

Name of Hazardous Substance:	CASRN#	Upper Bound (in lbs. or kg per day)	Lower Bound	Number of Days Release Occurs (per year)	Months of the Release
Ammonia	7664417	22#	13#	195	12

Release based on 2015 production data.

**CR-ERNS Report -- Addendum to Form R****CR-ERNS #: 1120241**

**Source Information:** For EACH source of a release from your facility, provide the following information on a SEPARATE sheet.

**Name of Source:** **Armstrong Prime Dryer**

Indicate whether the release from this source is either:

continuous without interruption \_\_\_\_\_ OR routine, anticipated, intermittent X

Pattern of the Release: Identify below how you established the pattern of release and calculated release estimates.

\_\_\_\_\_ Past release data X Knowledge of the facility's operations and release history X Engineering Estimates

\_\_\_\_\_ AP-42 X Best professional judgement \_\_\_\_\_ Other (explain)

Environmental Medium affected by the release from this source:

X Air \_\_\_\_\_ Surface Water \_\_\_\_\_ Soil or Ground Water

Air

If release is to air, please indicate stack height OR surface area of the release.

45' \_\_\_\_\_ Stack Height OR \_\_\_\_\_ Surface Area

Surface  
Water

If release is to Surface Water, please indicate name, type and specific information of the water body:

Name of water body \_\_\_\_\_

If stream: \_\_\_\_\_ Stream Order OR \_\_\_\_\_ Average flow rate (ft<sup>3</sup>/sec)

If lake: \_\_\_\_\_ Surface area (ac) AND \_\_\_\_\_ Average Depth (m)

Soil or  
Ground Water

Indicate distance of closest water well: \_\_\_\_\_

**Hazardous Substance Information:**

Name of Hazardous Substance:	CASRN#	Upper Bound (in lbs. or kg per day)	Lower Bound	Number of Days Release Occurs (per year)	Months of the Release
Ammonia	7664417	134#	75#	195	12

Release based on 2015 production data.



**CR-ERNS Report -- Addendum to Form R****CR-ERNS #: 1120241**

**Source Information:** For EACH source of a release from your facility, provide the following information on a SEPARATE sheet.

**Name of Source:** **Armstrong Finish Dryer**

Indicate whether the release from this source is either:

continuous without interruption \_\_\_\_\_ OR routine, anticipated, intermittent ☒ \_\_\_\_\_

**Pattern of the Release:** Identify below how you established the pattern of release and calculated release estimates.

\_\_\_\_\_ Past release data      \_\_\_\_\_ Knowledge of the facility's operations and release history      ☒ Engineering Estimates  
\_\_\_\_\_ AP-42      ☒ Best professional judgement      \_\_\_\_\_ Other (explain)

**Environmental Medium affected by the release from this source:**

☒ Air      \_\_\_\_\_ Surface Water      \_\_\_\_\_ Soil or Ground Water

Air

If release is to air, please indicate stack height OR surface area of the release.

46'      Stack Height      OR      \_\_\_\_\_ Surface Area

Surface  
Water

If release is to Surface Water, please indicate name, type and specific information of the water body:

Name of water body \_\_\_\_\_

If stream: \_\_\_\_\_ Stream Order      OR      \_\_\_\_\_ Average flow rate (ft<sup>3</sup>/sec)

If lake: \_\_\_\_\_ Surface area (ac)      AND      \_\_\_\_\_ Average Depth (m)

Soil or  
Ground Water

Indicate distance of closest water well: \_\_\_\_\_

**Hazardous Substance Information:**

Name of Hazardous Substance:	CASRN#	Upper Bound (in lbs. or kg per day)	Lower Bound	Number of Days Release Occurs (per year)	Months of the Release
Ammonia	7664417	9#	5#	195	12

Release based on 2015 production data.

**CR-ERNS Report -- Addendum to Form R****CR-ERNS #: 1120241**

**Source Information:** For EACH source of a release from your facility, provide the following information on a SEPARATE sheet.

**Name of Source:** **Armstrong Paint Mix Scrubber**

Indicate whether the release from this source is either:  
continuous without interruption \_\_\_\_\_ OR routine, anticipated, intermittent ☒ \_\_\_\_\_

**Pattern of the Release:** Identify below how you established the pattern of release and calculated release estimates.

\_\_\_\_\_ Past release data      \_\_\_\_\_ Knowledge of the facility's operations and release history      ☒ \_\_\_\_\_ Engineering Estimates  
\_\_\_\_\_ AP-42      ☒ \_\_\_\_\_ Best professional judgement      \_\_\_\_\_ Other (explain)

**Environmental Medium affected by the release from this source:**

☒ \_\_\_\_\_ Air      \_\_\_\_\_ Surface Water      \_\_\_\_\_ Soil or Ground Water

Air

If release is to air, please indicate stack height OR surface area of the release.

30.2' \_\_\_\_\_ Stack Height      OR      \_\_\_\_\_ Surface Area

Surface Water

If release is to Surface Water, please indicate name, type and specific information of the water body:

Name of water body \_\_\_\_\_

If stream: \_\_\_\_\_ Stream Order      OR      \_\_\_\_\_ Average flow rate (ft<sup>3</sup>/sec)

If lake: \_\_\_\_\_ Surface area (ac)      AND      \_\_\_\_\_ Average Depth (m)

Soil or Ground Water

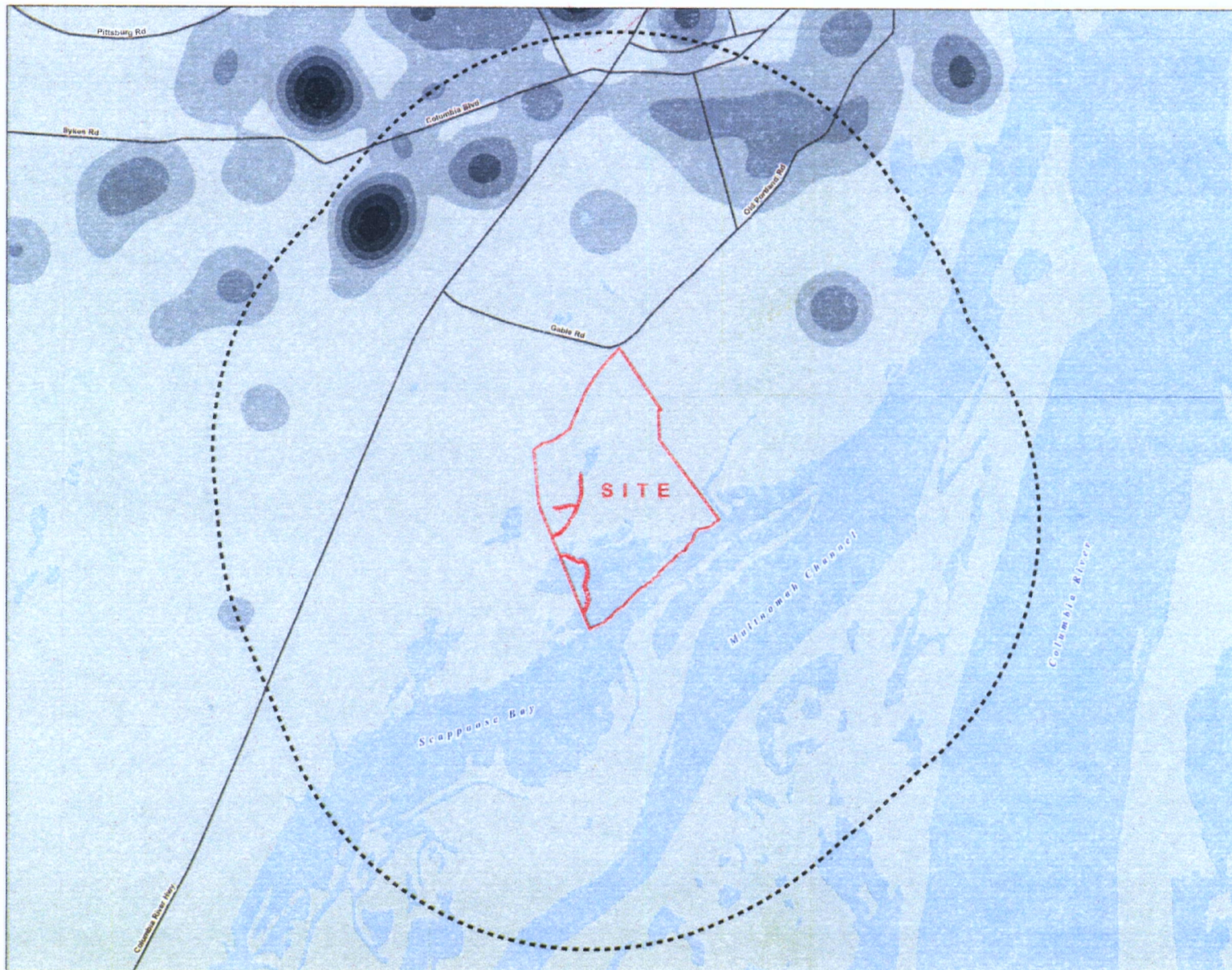
Indicate distance of closest water well: \_\_\_\_\_

**Hazardous Substance Information:**

Name of Hazardous Substance:	CASRN#	Upper Bound (in lbs. or kg per day)	Lower Bound	Number of Days Release Occurs (per year)	Months of the Release
Ammonia	7664417	1#	1#	195	12

Release based on 2015 production data.





**FIGURE X**  
Population Density in Surrounding Area  
Armstrong World Industries, Inc.

**LEGEND**

- Property Boundary
- 1-Mile Buffer
- Population Count (per cell)**
- 0 - 1
- 1 - 2
- 2 - 3
- 3 - 4
- 4 - 5
- 5 - 6

**NOTE:**  
Total population within 1-mile buffer is 4,798.



0 800 1,600 2,400  
Feet

**MAP NOTES:**  
Date: July 1, 2015  
Data Sources: US Census (2010)

